

ABSTRACT OF THE DISCLOSURE

An integrated airway adapter capable of monitoring any combination of respiratory flow, O₂ concentration, and concentrations of one or more of CO₂, N₂O, and an anesthetic agent in real time, breath by breath. Respiratory flow may be monitored with differential pressure flow meters under diverse inlet conditions through improved sensor configurations which minimize phase lag and dead space within the airway. Molecular oxygen concentration may be monitored by way of luminescence quenching techniques. Infrared absorption techniques may be used to monitor one or more of CO₂, N₂O, and anesthetic agents.

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